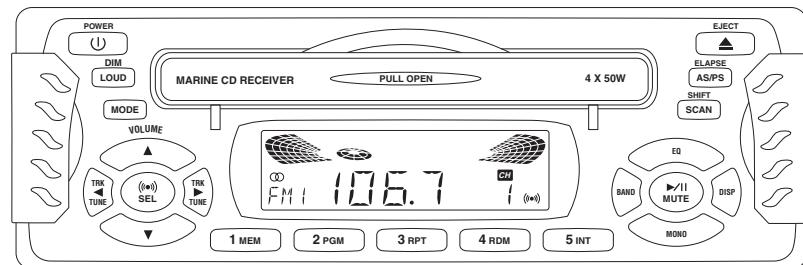


Installation and Operation Manual



M5100CD
Waterproof
AM/FM/WB and CD Stereo Receiver

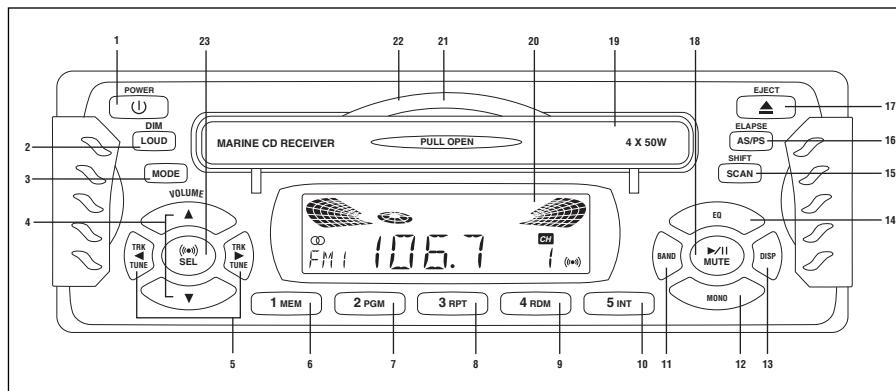
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US Patent Number D 500,303 S

Introduction

Your new M5100CD entertainment system has been designed to give you many years of listening pleasure. Take a moment to read through this manual and become familiar with the operations and features of this outstanding product.

It is advisable to keep this manual in your vehicle so it is readily available for reference. Be sure to fill out and send in your warranty card to ensure that you receive the full benefits of warranty repair in the unlikely event that your system will need service. We are confident that you will thoroughly enjoy your new mobile entertainment system.

Location and Function of Controls at a Glance



- 1. Power:** Turns the unit On/Off.
- 2. Dimmer/Loud Button:**
 - Loud Button:** Enhances high frequency and low frequency sound quality.
 - Dimmer Button:** Press and hold this button to change the brightness of the LCD display backlight.
- 3. Mode Button:** Changes sequentially through the following sources:
Radio Tuner > CD > CD Changer (optional) > Auxiliary > Radio Tuner.
- 4. Volume Buttons:** Adjusts the Volume, Bass, Treble, Balance and Fader.
- 5. Track/Tune Up and Down Buttons:** Adjusts the radio frequency, sets the clock, and changes CD tracks.
- 6. Multi-Function Button 1/MEM:**
 - Radio:** Recalls a memorized radio station, and programs a radio station into memory (See Radio Operation for more information).
 - CD:** Programs a CD track into memory (See CD Operation for more information).
- 7. Multi-Function Button 2/PGM:**
 - Radio:** Recalls a memorized radio station, and programs a radio station into memory (See Radio Operation for more information).
 - CD:** Enters CD track program mode (See CD Operation for more information).

Location and Function of Controls at a Glance

8. Multi-Function Button 3/RPT:

Radio: Recalls a memorized radio station, and programs a radio station into memory (See Radio Operation for more information).

CD: Continuously repeats the same track (See CD Operation for more information).

9. Multi-Function Button 4/RDM:

Radio: Recalls a memorized radio station, and programs a radio station into memory (See Radio Operation for more information).

CD: Plays all tracks on the current disc in random order (See CD Operation for more information).

10. Multi-Function Button 5/INT:

Radio: Recalls a memorized radio station, and programs a radio station into memory (See Radio Operation for more information).

CD: Plays the first several seconds of each track on the current disc (See CD Operation for more information).

11. Band Button: Selects the radio band in the following order: FM1, FM2, FM3, AM, WX.

12. Mono Button: Changes FM radio reception from Mono to Stereo.

13. Display Button: Displays either the clock or radio frequency. (See setting the clock for more information).

14. EQ Button: Selects preprogrammed equalizer settings in the following order: POP (Pop), JAZ (Jazz), CLA (Classical), JAM (Jam), ROC (Rock) and FLA (Flat).

15. Shift and Scan Button:

Shift Button: Enables the unit to scroll through the CD's (using Track/Tune Up and Down Buttons) when a CD Changer is connected.

Scan Button: Scans through the strong stations in the current radio band.

16. Elapse and AS/PS Button:

Radio: Automatic memory storing and preset scan (See Radio operation for more information).

CD: Displays elapsed time of current CD track or time remaining on the current CD.

17. Eject Button: Ejects the disc from the CD slot when the CD door is open.

18. Play/Pause and Mute Button:

Radio/Aux In: Mutes audio level.

CD: Starts CD play function or pauses CD play function.

19. CD Slot: Located behind the Waterproof CD Cover; insert discs here.

20. Display Area: Displays Radio, CD and Clock functions.

21. Reset Button: Resets control logic of CPU in the event of a lockup. See General Operations/Reset button for more details.

22. Waterproof CD Cover: To access the CD Slot, press down the tab on the top of the cover.

23. Audio Mode Selection Button: Selects the desired audio mode in the following order: Volume, Bass, Treble, Balance and Fader.

Radio Operation

Listening to the Radio

1. Push the "POWER" button (1) once to turn the unit on.
2. Press the "BAND" button (11) to select a radio band: FM1, FM2, FM3, AM or WX (weather band).
3. AM or FM Station Selection

Automatic Seek Station Selection: Press the TRK/TUNE DN or TRK/TUNE UP button (5) to automatically seek the next strong station.

Scan Station Selection: Press the **SCAN** button (15) to automatically scan through strong stations in the current radio band. The radio will pause for 5 seconds at each strong station. Each frequency will flash in the display. Press the scan button again to hold the current station.

Manual Station Selection: Press the TRK/TUNE DN or TRK/TUNE UP button for more than 3 seconds to manually select stations, and "MAN" will appear in the display. Use either button to manually seek up and down the frequency scale.

Note: If either button is not pressed for several seconds, the unit will return to Automatic Seek "AUTO" will appear in the display.

Weather Band Station Selection (WX)

Press the "BAND" button until WX appears on the display, then use the TRK/TUNE DN or TRK/TUNE UP button to manually seek the stations.

Programming the Radio

You can program up to 15 FM radio stations and 5 AM radio stations.

Manual Station Recall Programming

1. Press the "BAND" button (11) to select a radio band: FM1, FM2, FM3 or AM.
2. Select the desired station.
3. Press and hold one of the five station recall buttons (6-10), the button number and "CH" will appear in the display area. Release the button.
4. Repeat the Steps 1-3 to memorize additional stations as desired.

Automatic Station Store

1. Press the "BAND" button (11) to select a radio band: FM1, FM2, FM3 or AM.
2. Press the **ASPS** button (16) for more than 2 seconds, the radio will then search the current frequency and check the signal strength until the five strongest stations are stored into the corresponding preset number button. When completed, the system will scan the stored stations automatically.

Preset Scan

Press the **ASPS** button (16) to scan the preset stations. The radio will hold at that preset number for several seconds, then will scan again. To stop scanning when a desired station is reached press the **ASPS** button again.

Sound Controls

Adjusting the Main Volume, Bass Treble, Balance and Fader.

1. Press the **SEL** button (23) to select the desired audio mode. The audio modes will be displayed in the following order: Volume, Bass, Treble, Balance and Fader.
2. Press the Main Volume **▲** or **▼** buttons (4) to adjust the sound of the audio mode selected.

Note: The Bass and Treble levels can only be adjusted when the EQ setting is set to the "FLAT" setting.

Initial Volume Level

To program the Initial Volume Level, adjust the volume to the desired level, then press the "POWER" button for more than 3 seconds. The next time the unit is turned on, the volume will be at this initial level.

Adjusting the Audio Beep

Press the **SEL** button for more than 2 seconds to turn beep On/Off. When the beep is on the **(beep)** icon will be displayed.

Adjusting the Loud Feature

Press the LOUD button (2) to increase the bass and treble output, "LOUD" will then be displayed. Press the button again to release this function.

Mute

In Radio/Aux In mode, press the **▶/II** button (18) mute audio level. Press the button again to release this function.

General Operations

Setting the Clock

1. Press DISP button (13) for more than 3 seconds until the clock shown in the display area is flashing.
2. Press the TRK/TUNE DN button to adjust the hours
3. Press the TRK/TUNE UP button to adjust the minutes.

Display Priority

Clock Display Priority

Press and hold DISP button (13) while pressing the TRK/TUNE DN button to select Time Priority.

Pressing the DISP button while in Time Priority will temporarily display selected station frequency.

In CD Mode:

When the display priority is set to "Time", the time will be displayed.

Pressing DISP button will temporarily display CD track number, time remaining or elapsed time depending on current CD display option selected.

After 5 seconds the display will return to the clock.

Frequency Display Priority

Press and hold DISP button while pressing the TRK/TUNE UP button to select Frequency Priority. Pressing DISP button while in Frequency Priority will temporarily display clock.

In CD Mode:

When the display priority is set to "Frequency", the CD track number will be displayed.

Pressing the DISP button will temporarily display the clock. After 5 seconds the display will return to the CD display.

Selecting a Mode

Press the MODE button (3) to step sequentially through the following sources: Radio Mode to Radio Tuner > CD > CD Changer (optional) > Auxiliary > Radio Tuner.

Illumination Dimmer

Press LOUD/DIMMER button (2) for more than 2 seconds to adjust the brightness of the LCD display backlight.

Reset Button (20)

The Reset Button (21) is located behind the Waterproof CD Cover (22) and above the CD Slot. Activate the reset button with either a ballpoint pen tip or paper clip for the following reasons:

- After initial installation of the unit is completed.
- When the function buttons do not operate.
- Error symbol in the display.

If there is a disc in the slot when the reset button is pressed the disc will be ejected.

CD Changer Operation (Optional)

Select a Disc

1. Load your CD Changer with compact discs per the manufacturer's operating instructions.
2. Press the **SCAN** SHIFT button (15) to enter Shift Mode. "SHIFT" will then appear in the display, indicating the CD Changer is active.
3. Press the TRK/TUNE DN or TRK/TUNE UP (5) button to scroll through the CD's loaded in the CD Changer. If there isn't any operation for several seconds, the unit will exit Shift Mode automatically.

Notes on CD-Rs and CD-RWs:

- The unit cannot play a CD-R and CD-RW that is not finalized. (Please refer to the manual of your CD-R/CD-RW recorder or CD-R/CD-RW software for more information on the finalizing process).
- This unit will not play MP3 music or WMA music recorded on any CD-R or CD-RW disc.
- Be sure to only use discs with the following labels in this unit:



CD Player Operation

Inserting and Ejecting a Disc

Pull the tab at the top of the CD Door, and the door will open. Push a disc into the CD Slot (19), label side up, and the disc will begin to play. The disc will eject automatically when the CD Door is opened.

Select Tracks

Press the TRK/TUNE DN or TRK/TUNE UP button (5) to move to the previous track or next track. The track number appears in the Display Area.

Fast Forward and Fast Reverse

Press and hold the TRK/TUNE DN or TRK/TUNE UP button (5) to fast forward or fast reverse. Disc play starts from when you release the button.

Pause Disc Play

Press the **▶/II** button (18) to pause the CD player. Press it again to resume play.

Repeat the Same Track

Press the **3 RPT** button (8) to continuously repeat the same track. Press it again to stop repeat.

Play All Tracks in Random Order

Press the **4 RDM** button (9) to play all tracks on the current disc in random order. Press it again to stop random play.

Intro Scan

Press the **5 INT** button (10) to play the first 10 seconds of each track. Press it again to cancel the function and listen to the track.

Program CD Tracks

Use the Program function to select up to 32 CD tracks to play in any order. The Program function allows you to select a track number for each spot in the playing sequence. A CD must be inserted to use the Program function.

1. Press the **1 MEM** button (7) to enter Program mode. PGM starts flashing and the "P-01" appears in the display.
2. Press the TRK/TUNE DN or TRK/TUNE UP button to choose a track number. Then press the **1 MEM** button (7) to memorize it. Select the next track and it will memorized as "P-02".

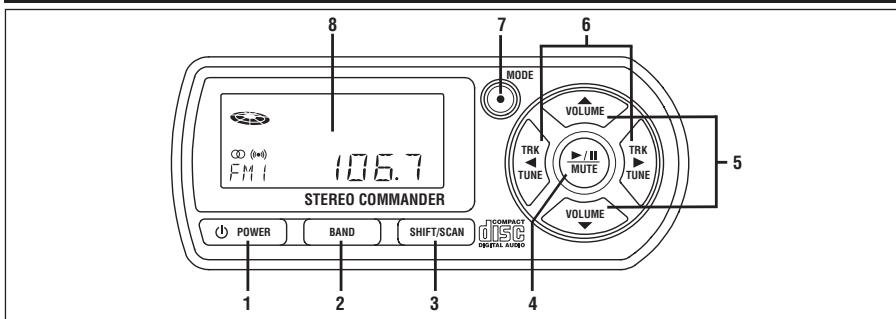
Repeat these steps to program tracks in the desired order. Then press the **2 PGM** button to play the CD in programmed order. When you have programmed 32 tracks, "FULL" will appear in the display.

- When the CD is played in programmed order, press the **2 PGM** button to begin programmed play, then press it again to exit the PGM mode.
- When the CD is playing in programmed order, pressing the **1 MEM** button will clear all the programmed content and "CLR" will appear in the display.
- If you don't press the **1 MEM** button (7) to carry out program setting, press the **2 PGM** button (8), "NO-P" will appear in the display.

Track/Time Display

To display the running time/remaining time of a track, press the **(ASPS) ELAPSE** button (16).

Waterproof Wired Remote General Operations (Optional)



1. Power Button: Press and release the \odot POWER button (1) to turn on/off the unit.

To program the initial volume level, adjust the volume to the desired level, then press the \odot POWER button for more than 3 seconds. The next time the unit is turned on, the volume will be at this initial level.

2. Band Button: Press the BAND button (2) to sequentially step through the following bands: FM1, FM2, FM3, AM and WX.

3. Shift/Scan Button:

For Radio Operation

Press the SHIFT/SCAN button (3) to scan through the strong stations in the current radio band. The radio will pause for five seconds at each strong station while flashing the frequency, then will continue to scan. Pressing the SHIFT/SCAN button again will stop the scanning, and play the current station.

For CD Changer (CDC) Operation

Press the SHIFT/SCAN button (3) to enter Shift Mode. "SHIFT" will then appear in the display, indicating the CD Changer is active. To change the current CD, press the TRK/TUNE DN or TRK/TUNE UP button (5) to scroll through the CDs loaded in the CD Changer. If there isn't any operation for several seconds, the unit will exit Shift Mode automatically.

4. Mute Button:

For Radio Operation

Press the \blacksquare/MUTE button (4) to activate the audio mute function and "MUTE" will appear in the display. Press the button once again to release mute function and the unit will return to the last volume position before it was muted.

For CD/CD Changer Operation

Press the \blacksquare/MUTE button (4) to pause the CD/CDC player. Press it again to resume play.

5. Volume Buttons: Press the \uparrow VOLUME button to increase or the \downarrow VOLUME button decrease the volume level.

6. Manual/Search Tuning and Track Selection Buttons:

For Radio Station Selection

- Press and release the TRK/TUNE DN or TRK/TUNE UP button (6) to search up or down to the next strong station. Continue to press and release the buttons until the desired station is located.
- Press and hold the TRK/TUNE DN or TRK/TUNE UP button for more than 3 seconds to activate Manual Tuning Mode (MAN will appear in the display). In Manual Tuning Mode you can quickly advance up or down the radio station scale by pressing and holding down the TRK/TUNE DN or TRK/TUNE UP buttons (6).
- After several seconds of non-use, the button (6) tuning function will revert back to Search Mode (AUTO will appear in the display).

Station Selection for Weather Band Operations

Press the TRK/TUNE DN or TRK/TUNE UP button (6) to select channels CH1 – CH7.

Select Tracks for CD or CD Changer Operation

Press the TRK/TUNE DN or TRK/TUNE UP button (6) to move to the previous track or next track. Press and hold the TRK/TUNE DN or TRK/TUNE UP button (6) for more than 3 seconds to activate fast rewind or fast forward of the disc. Disc play starts from when you release the button.

7. Mode Button: Press the MODE button (7) to step sequentially through the following sources:

Radio Tuner > CD > CD Changer (optional) > Auxiliary > Radio Tuner.

8. Display Area: This area displays Radio/CD functions, along with all other activated functions (8).

Waterproof Wired Remote Introduction

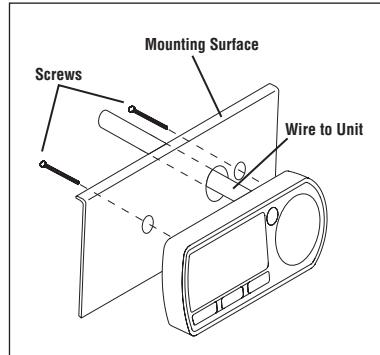
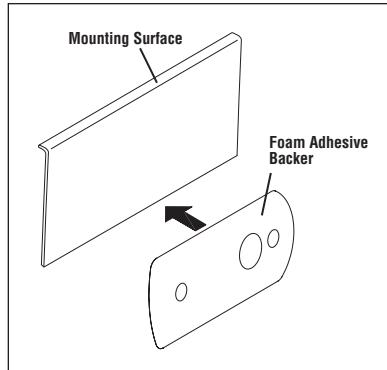
This unit is a wired remote control made using a modified controller or similar layout. It is capable of operating the specified functions on the M5100CD receiver. The body, buttons, controls and display are UV and water-resistant. It includes a LCD and an illumination circuit.

Take a moment to read through this section and become familiar with the operations and features of this outstanding product. It is advisable to keep this manual in your vehicle so it is readily available for reference. Be sure to fill out and send in your warranty card to ensure that you receive the full benefits of warranty repair in the unlikely event that your system will need service.

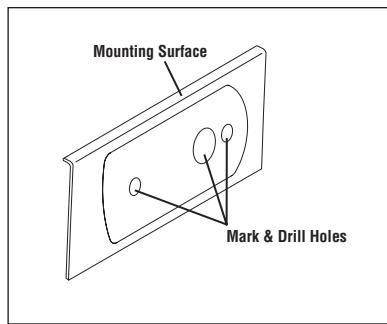
Installation Procedures

Installing the Unit

1. Using the foam adhesive backer of the remote as a template, determine the mounting location on the mounting surface and mark the three hole locations.



3. Remove the backer to the foam adhesive backer and adhere it to the back of the remote.
4. Feed the remote wire through the 5/8" hole in the mounting surface and attach the remote to the mounting surface using the supplied screws.
5. Attach the remote wire to the unit according to the wiring diagram on Page 11.



Note: The Wired Remote comes with an extension cord so the remote can be mounted a far distance from the receiver.

2. Remove the foam adhesive backer and drill two 3/8" and one 5/8" mounting holes in the marked positions.

Wiring

Step 1: The radio chassis is designed to be "Panel Mounted" through a opening in the mounting panel. See the installation part of this manual for panel mounting.

Step 2: Bring all wiring for the connection of the unit (including the antenna) through the mounting hole. Connect the wiring as follows:

Yellow Wire: Connect this wire to a constant +12 volt power source (a power source that is not controlled by the ignition key).

Red Wire(w/Fuse): Connect this wire to a switched +12 volt power source (a power source turned on and off by the ignition key). The fuse has a rating of .5A.

Blue Wire: Connect this wire to the (+) power antenna activation circuit. If no power antenna exists, tape-off the end of this wire to prevent shorting out of the unit.

Black Wire: Connect this wire to the frame of the vehicle (ground). This wire is the chassis grounding wire for the unit.

White Wire: Connect this wire to the Left Main Speaker (+) positive terminal or wire.

White Wire with Black Stripe: Connect this wire to the Left Main Speaker (-) negative terminal or wire.

Green Wire: Connect this wire to the Left Remote Speaker (+) positive terminal or wire.

Green Wire with Black Stripe: Connect this wire to the Left Remote Speaker (-) negative terminal or wire.

Gray Wire: Connect this wire to the Right Main Speaker (+) positive terminal or wire.

Gray Wire with Black Stripe: Connect this wire to the Right Main Speaker (-) negative terminal or wire.

Purple Wire: Connect this wire to the Right Remote Speaker (+) positive terminal or wire.

Purple Wire with Black Stripe: Connect this wire to the Right Remote Speaker (-) negative terminal or wire.

Red/White RCA Connectors: Two sets of line out cables are provided for connections to external amplifiers.

Note: This unit is designed to connect to (4) four speakers. If the installation only requires (2) two speakers, use the White and Gray wire sets to connect the speakers.

WARNING!

Any wires left unconnected must be taped-off or capped off to prevent shorting.

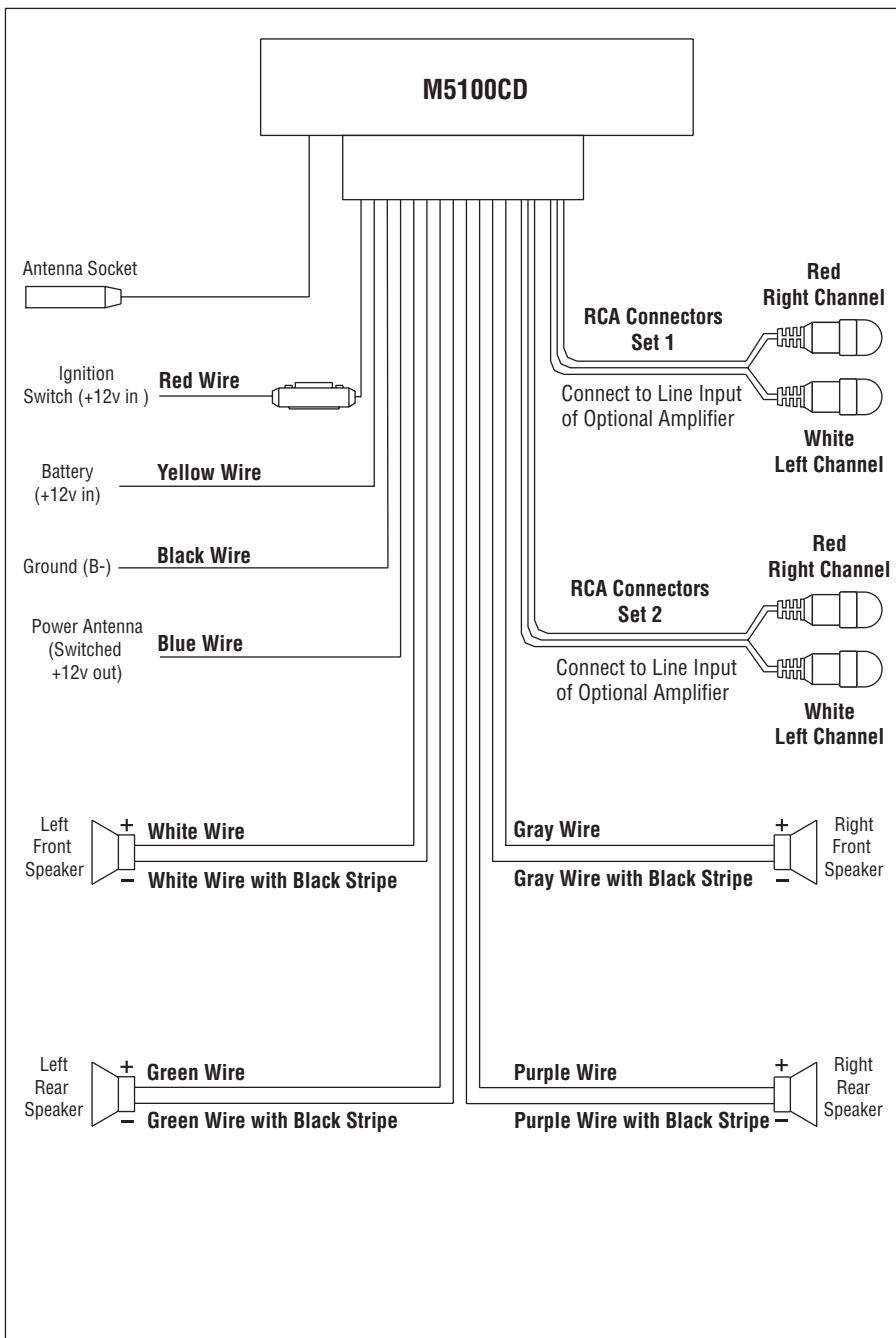
DO NOT connect speaker ground wires together.

DO NOT connect speaker ground wires to the chassis of the vehicle.

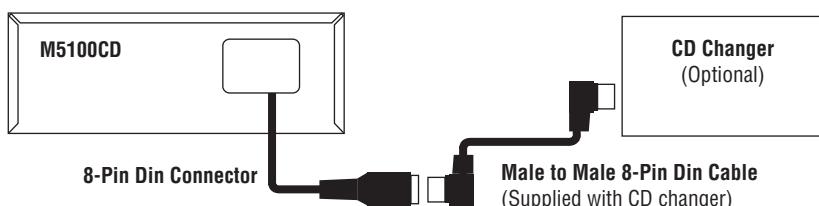
DO NOT connect front and rear speaker wires together.

FAILURE TO FOLLOW ANY OF THESE WARNINGS WILL RESULT IN DAMAGE TO THIS UNIT AND VOIDS THE WARRANTY.

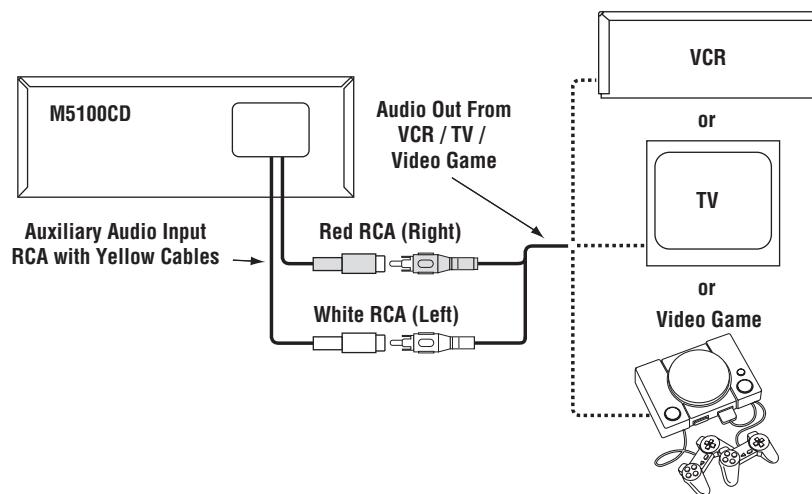
Wiring Diagram



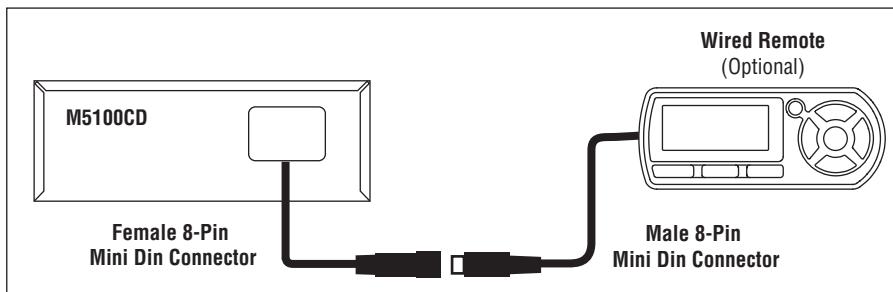
CD Changer Connection



Auxiliary Connection



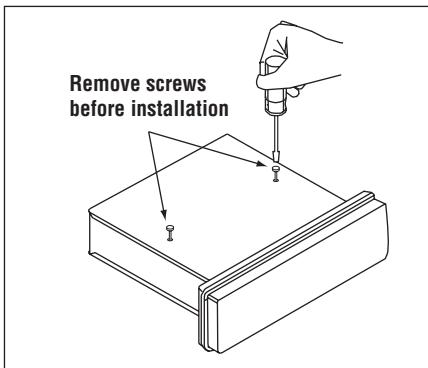
Wired Remote Connection



Installation

Remove Transportation Screws

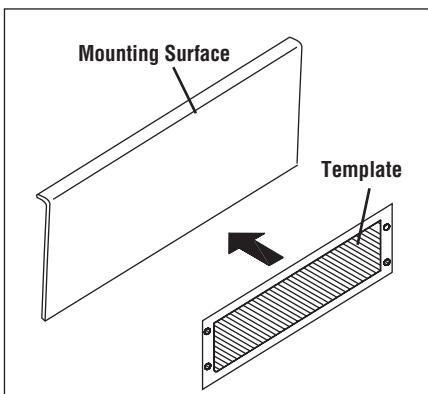
Before installing the unit, remove the two screws shown in the illustration below.



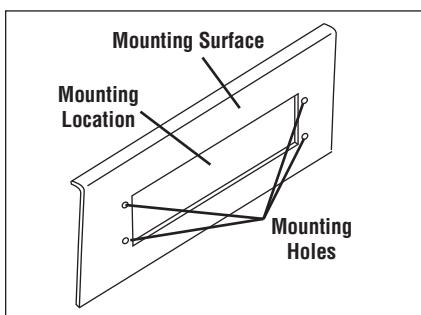
Note: If this unit is to be installed in a boat or a spa, you should use the two pieces of plastic film (30 mm X 20 mm) supplied to seal the two holes after removing the screws.

Installing the Unit

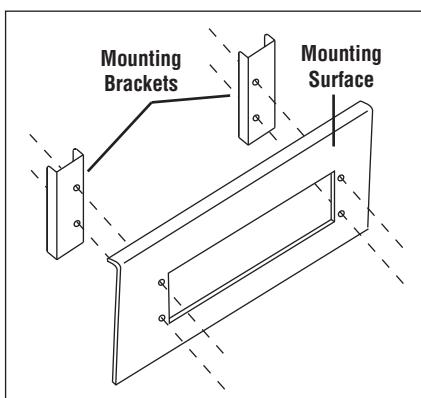
1. Using the mounting paper template supplied with the unit, determine the mounting location and then stick the template on the location.



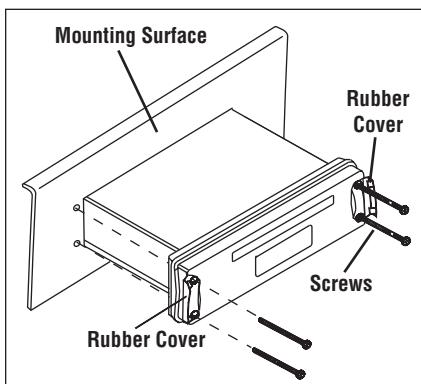
2. Cut and remove the hatching area on the template. Then drill four 1/8" mounting holes in the exact position according to the mounting paper.



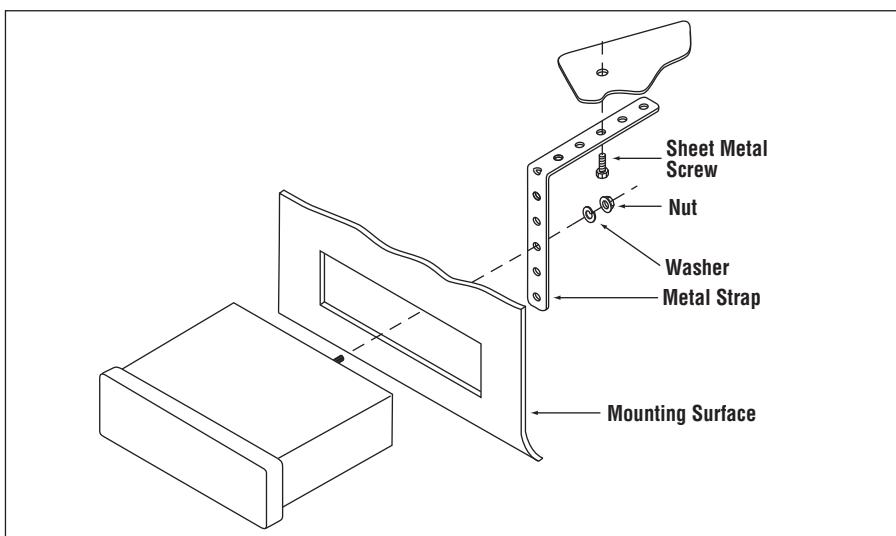
3. Use the glue paper to stick the two mounting brackets to the back of the mounting surface. The screw holes of the brackets must respectively aim at the mounting holes in order to fix the unit to the mounting surface.



4. Open the two pieces of rubber cover on the unit to display the four screw holes then using four screws (M4X30) to mount the unit to the dashboard.



Installation



Trouble Shooting

Before going through the trouble shooting table below, check the wiring connection. If the problem persist, consult your nearest service dealer.

SYMPTOM	CAUSE	SOLUTION
No power	The ACC Power Supply is not connected.	Both the red and yellow wires require power from the power source.
	The fuse is blown.	Replace the fuse.
Disc cannot be loaded, played or ejected	Presence of disc inside the player.	Remove the disc in the player, and replace it with another disc.
	Disc was inserted upside down.	Insert the compact disc with the label facing up.
	Compact disc is extremely dirty or disc is defective.	Clean the disc or try playing a another disc.
	Temperature inside the unit is too high.	Allow the unit to cool off, then try again.
	Condensation.	Leave the player off for an hour, then try playing it again.
No sound	Volume is set at the minimum level.	Adjust volume to the desired level.
	Speaker wiring is not properly connected.	Check the wiring connection.
Sound skips	The installation angle is more than 30 degrees.	Adjust the installation angle to less than 30 degrees.
	Compact disc is extremely dirty or disc is defective.	Clean the disc or try playing a another disc.
The operation keys do not work	The built-in microcomputer is not operating properly due to noise.	Press the RESET button. Front panel is not properly fixed into its place.
The radio does not work	The antenna cable is not connected.	Insert the antenna cable firmly.
The radio station automatic does not work	The signals are too weak.	Select a station manually.

Specifications

GENERAL

Power Supply Requirements:
DC 12 Volts, Negative Ground
Chassis Dimensions:
178 mm (W) x 165 (D) x 50 (H)

Tone Controls:
Bass: 100 Hz \pm 10 dB
Treble: 10 kHz \pm 10 dB
Maximum Output Power:
4 x 50 watts
Current Drain:
15 Ampere (Max.)

CD PLAYER

Signal to Noise Ratio:
> 55 dB
Channel Separation:
> 50 dB
Frequency Response:
40Hz – 18 kHz

FM RADIO

Frequency Coverage:
87.5 to 107.9 MHz
Sensitivity (S/N=20dB):
3 μ V
Stereo Separation:
> 30dB

AM RADIO

Frequency Coverage:
530 to 1720 kHz
Sensitivity (S/N=20dB):
32 dBu

Warranty

ONE (1) YEAR LIMITED WARRANTY

Magnadyne Corporation or its authorized agents will within one year from the date of sale to you, repair, replace or refund the retail sales price of said product or any part thereof, at the option of the Magnadyne Corporation or its authorized agents, if said product or part is found defective in materials or workmanship, when properly connected and operating on the correct power requirements designated for the specific product. This warranty and Magnadyne Corporation or its authorized agents obligations hereunder do not apply where the product was; damaged while in the possession of the consumer, subjected to unreasonable or unintended use, not reasonably maintained, utilized in commercial or industrial operations, or serviced by anyone other than Magnadyne Corporation or its authorized agents, or where the warning seal on the product is broken or the power and/or plugs are detached from the unit. Magnadyne Corporation or any of its authorized agents will not assume any labor costs for the removal and reinstallation of any product found to be defective, or the cost of transportation to Magnadyne Corporation or its authorized agents. Such cost are the sole responsibility of the purchaser.

This warranty does not cover the cabinet appearance items or accessories used in connection with this product, or any damage to recording or recording tape, or any damage to the products resulting from improper installation, alteration, accident, misuse, abuse or acts of nature.

MAGNADYNE CORPORATION OR ITS AUTHORIZED AGENTS SHALL NOT BE LIABLE TO ANYONE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES OR CLAIMS EXCEPT THOSE ACCORDED BY LAW. NO EXPRESSED WARRANTY OR IMPLIED WARRANTY IS GIVEN EXCEPT THOSE SET FORTH HEREIN. NO IMPLIED WARRANTY SHALL EXTEND BEYOND ONE YEAR FROM THE DATE OF SALE.

This warranty extends only to the original purchaser of the product and is not transferable. Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights, and you may have other rights that vary from state to state.

Defective merchandise should be returned to the original point of purchase or secondly, to:
Magnadyne Corporation, 1111 W. Victoria Street, Compton CA 90220
www.magnadyne.com

Return Authorization must be obtained before sending, or merchandise may be refused.

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